oppositely from the roller **60**, configured and positioned to form a manual release lever **74**. By virtue of its oppositely directed extension, with respect to the roller **60** about the pivot point **46**, when the manual release lever **74** is pushed toward the reverse direction, the roller **60** of the tow catch **40** is lifted out of contact with the support **30**, so that a tow **24** may be conveniently threaded through, between the roller **60** and the support **30**, and/or be released from the tow catch **40**.

As will be appreciated, from a comparative examination of FIGS. **4** and **5**, the stop bar **42**, of the exemplary embodiment of the tow catch module **34** is positioned in such a manner that it will align all of the tow catches **40** in a manner allowing the tow catch module **34** to be readily positioned on the output side **50** of the support **30** during installation of the tow catch module **34** into the support frame **36**.

Those having skill in the art will recognize that, although the distal end of the tow catch **40**, of the exemplary embodiment described herein, was formed by the outer periphery of the roller **60**, in other embodiments of the invention the distal end of the arm **52** may include other arrangements for forming the distal end of the tow catch **40**, which do not include the roller **60** and its associated one-way clutch **58** and axle **56**. For example, the distal end of the tow catch arm **52** could include a non-rotatable end surface adapted for directly contacting the tow **24**. In some embodiments of the invention, it may be desirable to use a roller, directly connected to the arm of the tow catch, through a conventional axle, without inclusion of the one-way clutch **58** of the exemplary embodiment of the tow catch **40** disclosed herein. It may also be desirable, in some embodiments of the invention, to eliminate the adjustable spring cartridge, used in the exemplary embodiment, and utilize instead another form of spring, such as a torsion spring, or simply to eliminate the spring function all together.

It is also noted, that although the exemplary embodiments of the invention disclosed herein, are essentially passive mechanical arrangements including a tow catch, according to the invention, there is no intent to limit application of a tow catch, according to the invention, to only those embodiments which are passively actuated. In other embodiments of the invention, it may be desirable to provide some form of pneumatic, electrical, or other active actuation systems for operating a tow catch, according to the invention, in one or more of its modes of operation.

FIGS. **6** and **7** illustrate a second exemplary embodiment of an automated fiber placement machine **80**, which is substantially identical to the first exemplary embodiment of the automated fiber placement machine **13**, described hereinabove with reference to FIGS. **1-5**, with the exception that the second exemplary embodiment of the automated fiber placement machine **80** includes an alternate exemplary embodiment of a tow catch apparatus **82** according to the invention. For sake of clarity and facilitating understanding of the second exemplary embodiment **80** of the invention, like reference numerals are utilized wherever appropriate in FIGS. **6** and **7**, as compared to FIGS. **1-5**.

In the second exemplary embodiment of the tow catch apparatus **82**, the support **30** is formed by the outer peripheries **84** of a plurality of flanged support wheels **86** which are individually rotatably mounted by bushings **88** on a common axle **90** for rotation about a common support wheel axis **92**. The opposite axial ends of the axle **90** are mounted within a pair of slots **94**, **96** in the frame **36**. The ends of the axle **90** are secured within the slots **94**, **96** by bolts **98** and washers **100** in such a manner that the flanged support wheels **86** may be adjustably positioned with respect to the pivot point **46**, to achieve proper alignment and positioning of the flanged wheels **86** with respect to the rollers **60** at the ends of the arms **52**, so that the distal ends of the arms **52**, formed by the outer periphery of the rollers **60**, clamp the tows **24** between the distal ends of the tow catches **40** and the outer periphery **84** of the flanged support wheels **86** in the same manner as described above for clamping the tows **24** against the support **30** in the first exemplary embodiment of the tow catch apparatus **10** with reference to FIGS. **4** and **5**.

Although not specifically illustrated in the drawings, in some forms of the invention it may be advantageous to form the flanged support wheels at least partially from a conformable material to facilitate clamping of the tow **24** against the outer periphery **84** of the flanged wheels.

The use of the terms "a" and "an" and "the" and similar referents in the context of describing the invention (especially in the context of the following claims) is to be construed to cover both the singular and the plural, unless otherwise indicated herein or clearly contradicted by context. The terms "comprising," "having," "including," and "containing" are to be construed as open-ended terms (i.e., meaning "including, but not limited to,") unless otherwise noted. Recitation of ranges of values herein are merely intended to serve as a shorthand method of referring individually to each separate value falling within the range, unless otherwise indicated herein, and each separate value is incorporated into the specification as if it were individually recited herein. All methods described herein can be performed in any suitable order unless otherwise indicated herein or otherwise clearly contradicted by context. The use of any and all examples, or exemplary language (e.g., "such as") provided herein, is intended merely to better illuminate the invention and does not pose a limitation on the scope of the invention unless otherwise claimed. No language in the specification should be construed as indicating any non-claimed element as essential to the practice of the invention.

Preferred embodiments of this invention are described herein, including the best mode known to the inventors for carrying out the invention. Variations of those preferred embodiments may become apparent to those of ordinary skill in the art upon reading the foregoing description. The inventors expect skilled artisans to employ such variations as appropriate, and the inventors intend for the invention to be practiced otherwise than as specifically described herein. Accordingly, this invention includes all modifications and equivalents of the subject matter recited herein as permitted by applicable law. Moreover, any combination of the above-described elements in all possible variations thereof is encompassed by the invention unless otherwise indicated herein or otherwise clearly contradicted by context.

What is claimed is:

1. A tow catch, for selectively clamping a fiber tow against a support in a manner allowing one-way motion of the tow in a forward direction from an input side to an output side of the support and precluding motion of the tow in a reverse direction from the output side to the input side of the support, the tow catch comprising:

an arm, adapted for pivotable motion about a pivot point disposed at a minimum distance from the support, and terminating in a distal end of the arm disposed at a distance greater than the minimum distance from the support;

the distal end of the arm being adapted for resting against the tow on the output side of the support during motion of the tow in both the forward direction and the reverse direction;

whereby motion of the tow in the reverse direction urges the arm to pivot in the reverse direction in such a manner that the distal end of the arm clamps the tow between the